

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-3. (Cancelled)

4. (Currently Amended) An electro-luminescence display device, comprising:
electro-luminescence cells arranged in a matrix type at crossings of gate lines and data
lines;

a supply voltage line for supplying a driving voltage to the electro-luminescence cells;
driving circuits for controlling a current applied from the driving voltage of the supply
voltage line to the electro-luminescence cells in response to video signals, wherein each of
driving circuit includes a first driving circuit and a second driving circuit; and
control circuits for applying the video signals to the driving circuits, wherein each of the
control circuit circuits is directly connected between the data line and the supply voltage line and
is positioned between the first driving circuit and the second driving circuit so that the control
circuit supplies the video signal to the first driving circuit and the second driving circuit.

5. (Currently Amended) The electro-luminescence display device according to claim
4, wherein the first driving circuit is provided at the ith horizontal line (wherein i is an integer) to
apply the current to the electro-luminescence cell positioned at the ith horizontal line, in response
to a video signal from the control circuit controlled by the ith gate line, when a gate signal is
applied to the (i-1)th gate line[[;]], and

the second driving circuit is provided at the (i+1)th horizontal line to apply the current to
the electro-luminescence cell positioned at the (i+1)th horizontal line, in response to a video
signal from the control circuit controlled by the ith gate line, when a gate signal is applied to the
(i+1)th gate line.

6. (Cancelled)

7. (Original) The electro-luminescence display device according to claim 5,

wherein the (i+1)th gate line is connected to a driving circuit provided at the (i+2)th horizontal line.

8. (Original) The electro-luminescence display device according to claim 5, wherein the (i-1)th gate line is connected to a driving circuit provided at the (i-1)th horizontal line.

9. (Original) The electro-luminescence display device according to claim 5, wherein the first driving circuits includes:

a first driving thin film transistor having a source terminal connected to the supply voltage line and a drain terminal connected to the electro-luminescence cell positioned at the ith horizontal line;

a second driving thin film transistor having a drain terminal connected to a gate terminal of the first driving thin film transistor, a source terminal connected to the control circuit and a gate terminal connected to the (i-1)th gate line; and

a storage capacitor connected between the source terminal and the gate terminal of the first driving thin film transistor.

10. (Original) The electro-luminescence display device according to claim 5, wherein the second driving circuits includes:

a first driving thin film transistor having a source terminal connected to the supply voltage line and a drain terminal connected to the electro-luminescence cell positioned at the (i+1)th horizontal line;

a second driving thin film transistor having a drain terminal connected to a gate terminal of the first driving thin film transistor, a source terminal connected to the control circuit and a gate terminal connected to the (i+1)th gate line; and

a storage capacitor connected between the source terminal and the gate terminal of the first driving thin film transistor.

11. (Original) The electro-luminescence display device according to claim 9 or 10, wherein the control circuit includes:

a first control thin film transistor having a source terminal connected to the supply voltage line and a drain terminal and a gate terminal connected to the source terminal of the second driving thin film transistor; and

a second control thin film transistor having a drain terminal connected to the gate terminal of the first control thin film transistor, a source terminal connected to the data line and a gate terminal connected to the ith gate line.

12. (Original) The electro-luminescence display device according to claim 11, wherein any one of the first and second control thin film transistors is provided at the ith horizontal line while the remaining control thin film transistor is provided at the (i+1)th horizontal line.

13. (Original) The electro-luminescence display device according to claim 11, further comprising:

a gate driver for applying a gate signal having a turn-on potential during two horizontal periods to the gate lines.

14. (Original) The electro-luminescence display device according to claim 13, wherein a gate signal applied to the ith gate line overlaps a gate signal applied to the (i+1)th gate line during one horizontal period.

15. (Original) The electro-luminescence display device according to claim 13, wherein, if a gate signal is applied to the (i-1)th and ith gate lines, then the second driving thin film transistor connected to the (i-1)th gate line and the second control thin film transistor connected to the ith gate line are turned on; and

as the second control thin film transistor is turned on, a video signal from the data line is applied to the first driving thin film transistor and the first control thin film transistor that are positioned at the ith horizontal line.

16. (Original) The electro-luminescence display device according to claim 15, wherein the first driving thin film transistor positioned at the ith horizontal line applies the

current corresponding to the video signal to the electro-luminescence cell provided at the ith horizontal line.

17. (Original) The electro-luminescence display device according to claim 15, wherein the first control thin film transistor applies the current corresponding to the video signal from the supply voltage line to the data line.

18. (Original) The electro-luminescence display device according to claim 17, wherein a voltage corresponding to the current flowing in the first control thin film transistor is stored in the storage capacitor.

19. (Currently Amended) An electro-luminescence display device, comprising:
a plurality of pixels arranged in a matrix type;
a plurality of data lines for applying video signals to the pixels;
a plurality of gate lines crossing the data lines, wherein each of the gate lines is shared with the pixels positioned adjacently to each other at the upper and lower sides of the gate line;
electro-luminescence cells provided for each pixel;
a supply voltage line for supplying a driving voltage to the electro-luminescence cells;
driving circuits for applying a current corresponding to the video signals to the electro-luminescence cells in response to the video signals; and
~~control circuits connected to the data lines to apply for applying the video signals supplied to the data lines to the driving circuits, wherein each of the control circuits is directly connected between the data line and the supply voltage line and is positioned between the first driving circuit and the second driving circuit so that the control circuit supplies the video signal to the first driving circuit and the second driving circuit.~~

20. (Original) The electro-luminescence display device according to claim 19, further comprising:
a gate driver for applying a gate signal having a turn-on potential during two horizontal periods to the gate lines.

21. (Original) The electro-luminescence display device according to claim 20, wherein a gate signal applied to the i^{th} gate line (wherein i is an integer) overlaps a gate signal applied to the $(i+1)^{\text{th}}$ gate line during one horizontal period.

22. (Original) The electro-luminescence display device according to claim 21, wherein each of the driving circuits includes:

a first driving circuit provided at the i^{th} horizontal line (wherein i is an integer) to apply the current to the electro-luminescence cell positioned at the i^{th} horizontal line, in response to a video signal from the control circuit controlled by the i^{th} gate line, when a gate signal is applied to the $(i-1)^{\text{th}}$ gate line; and

a second driving circuit provided at the $(i+1)^{\text{th}}$ horizontal line to apply the current to the electro-luminescence cell positioned at the $(i+1)^{\text{th}}$ horizontal line, in response to a video signal from the control circuit controlled by the i^{th} gate line, when a gate signal is applied to the $(i+1)^{\text{th}}$ gate line.

23. (Original) The electro-luminescence display device according to claim 22, wherein one of the control circuits is positioned between the first driving circuit and the second driving circuit.

24-25. (Cancelled)